

ESERCITAZIONE PROBABILITA'

(somma logica di eventi)

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ESTRAZIONE DI UNA CARTA DA UN MAZZO REGOLARE DI 40 CARTE

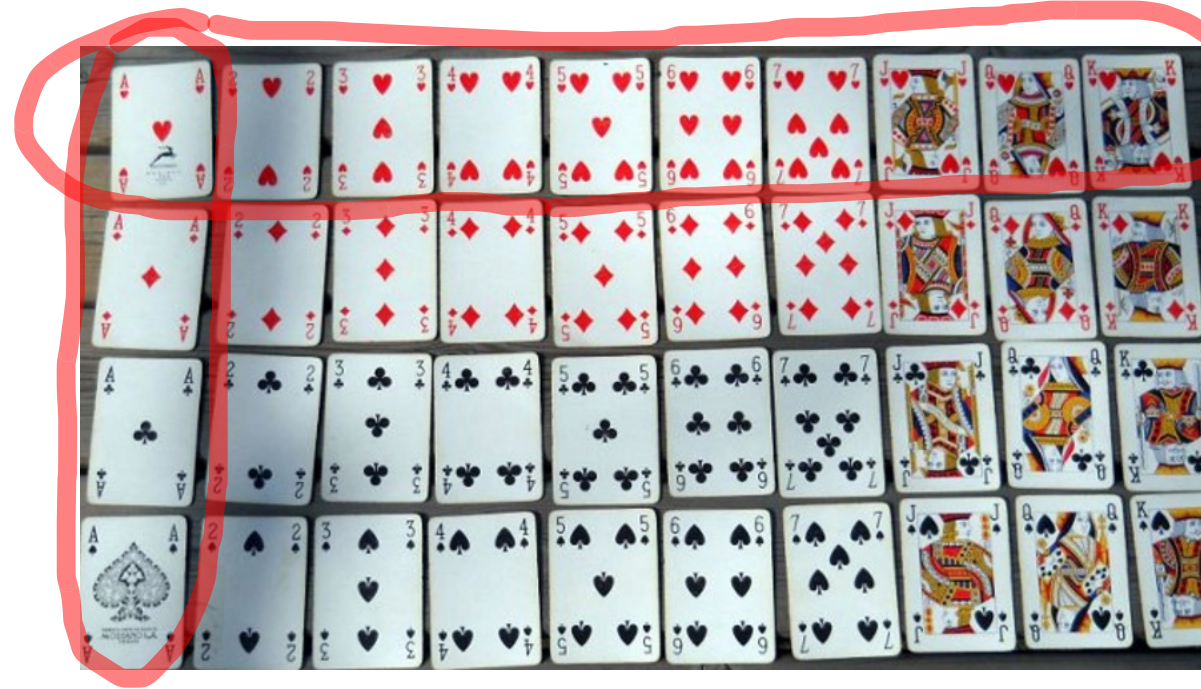
$$P(\heartsuit) = \frac{10}{40} = \frac{1}{4} = 0,25$$

$$P(\overline{\heartsuit}) = \frac{30}{40} \quad 1 - \frac{10}{40}$$

$$P(\text{FIG}) = \frac{12}{40}$$

$$P(A \overset{\circ}{\vee} \text{FIG}) = \frac{4}{40} + \frac{12}{40} = \frac{16}{40}$$

$$P(A \vee \heartsuit) = \frac{4}{40} + \frac{10}{40} - \frac{1}{40}$$



COMP.

$$P(A \cup B) = P(A) + P(B) - P(A \cap B)$$

INC.

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LANCIO DI UNA DADO REGOLARE (D6)



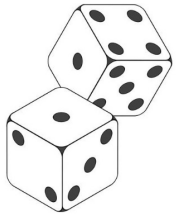
$$P(N=1) = \frac{1}{6}$$

$$P(\text{PARI}) = \frac{3}{6}$$

$$P(N < 3) = \frac{2}{6}$$

$$P(\text{PARI} \vee N < 3) = \frac{3}{6} + \frac{2}{6} - \frac{1}{6} = \frac{4}{6}$$





LANCIO DI DUE DADI (D6) REGOLARI

$$6 \cdot 6 = 36$$

$$P(N \text{ uguali}) = \frac{6}{36}$$

$$P(N^{\circ} > 10) = \frac{3}{36}$$

$$P(N^{\circ} < 4) = \frac{3}{36}$$

$$P(N = 7) = \frac{6}{36}$$

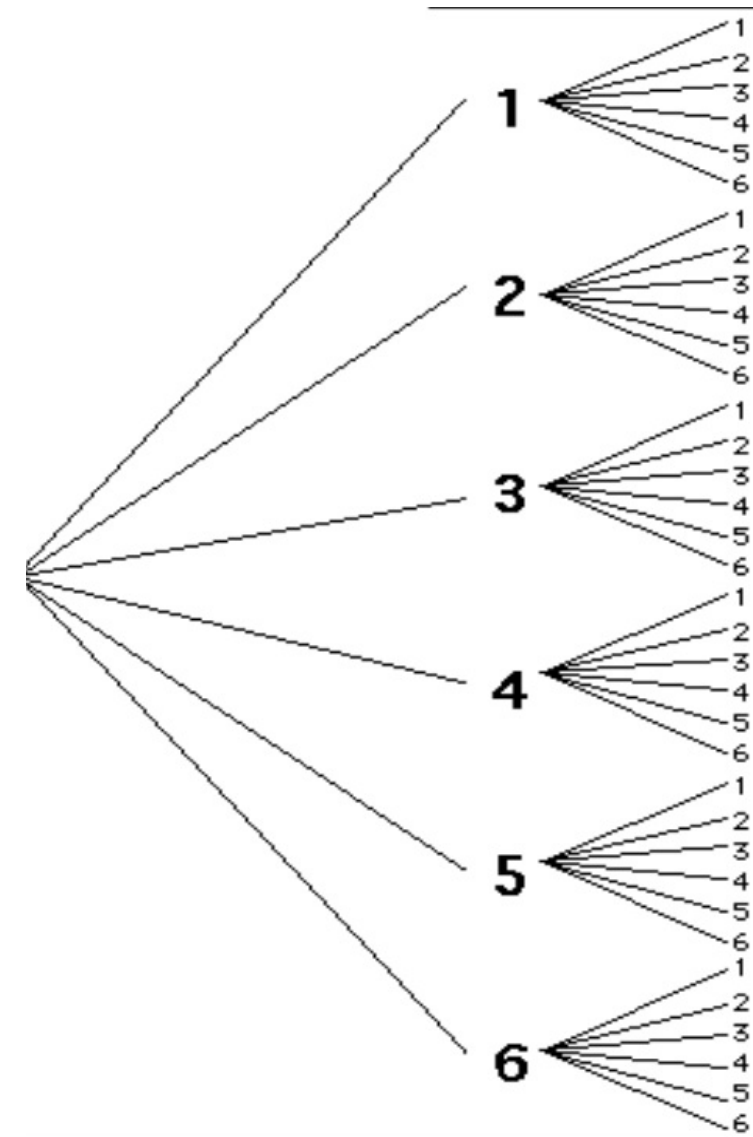
5 6 6 5 6 6

1 1 1 2 2 1

2 5 5 2

1 6 6 1

3 4 4 3



ESTRAZIONE DI UNA PALLINA DALLE SEGUENTE URNA



14 PALLINE

$$P(\text{ROSSA}) = \frac{5}{14}$$

$$P(\overline{\text{ROSSA}}) = 1 - \frac{5}{14} = \frac{9}{14}$$

$$P(\text{ROSSA} \vee \text{BLU}) = \frac{5}{14} + \frac{3}{14} = \frac{8}{14}$$

$$P(\text{PARI}) = \frac{6}{14}$$

$$P(\text{ROSSA} \wedge \text{DISPARI}) = \frac{3}{14}$$

$$P(\text{ROSSA} \vee \text{DISPARI}) = \frac{5}{14} + \frac{8}{14} - \frac{3}{14} = \frac{10}{14}$$

ESTRAZIONE DI UNA PALLINA DA UN'URNA CON 90 PALLINE NUMERATE DALL'1 AL 90

$$P(\text{PARI}) = \frac{45}{90}$$

$$P(\text{DIV } 3) = \frac{30}{90}$$

$$90/3 = 30$$

$$P(\text{DIV } 7) = \frac{12}{90}$$

$$90/7 = 12,8$$

D P
3 6 9 12

$$P(\text{DIV } 3 \vee \text{PARI}) = \frac{30}{90} + \frac{45}{90} - \frac{15}{90} = \frac{60}{90}$$

$$P(\text{DIV } 3 \vee \text{DIV } 7) = \frac{30}{90} + \frac{12}{90} - \frac{4}{90} = \frac{38}{90}$$

mcm 21

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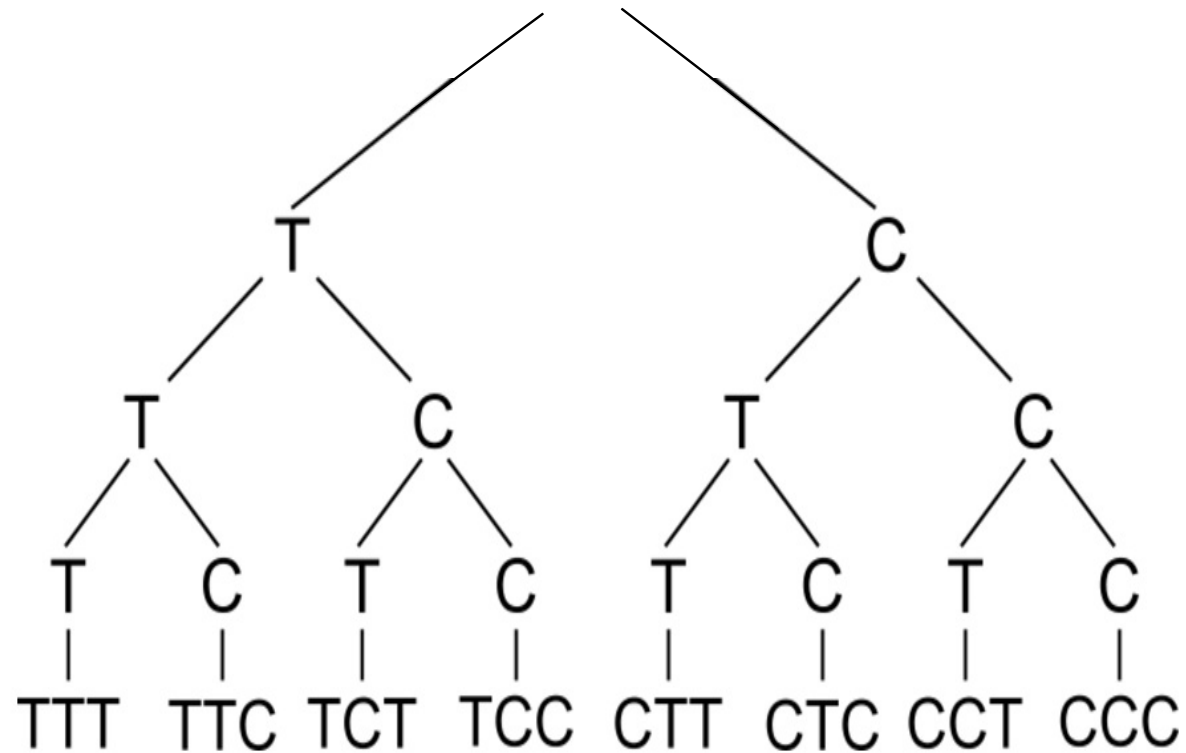
LANCIO DI UNA MONETA REGOLARE TESTA/CROCE PER 3 VOLTE



Testa



Croce



$$2 \cdot 2 \cdot 2 = 8$$

$$P(3T) = \frac{1}{8}$$

$$P(3C) = \frac{1}{8}$$

$$P(\text{Almeno 1 C}) = 1 - \frac{1}{8} = \frac{7}{8}$$